

**HISTORICAL NOTE****AMBROISE PARE 1510-1590**

Pare was born in 1510 in Bourge-Hersent in North-West France. He initially worked with his brother who was a surgeon cum barber. He practiced at Hotel Dieu, Frances oldest Hospital. He was an anatomist and invented several surgical instruments. He became a war injury doctor at Piedmont where he used boiled oil for treating gunshot wounds. One day he improvised using oil of roses, egg white and turpentine with very good results. Henceforth he stopped the cauterization and hot oil method.

Pare was a keen observer and did not allow the beliefs of the day to supersede the evidence at hand. In his autobiographical book, *Journeys in Diverse Places*, Pare inadvertently practiced the scientific method when he returned the following morning to a battlefield. He compared one group of patients who paid for treatment treated in the traditional manner with boiling elderberry oil and cauterization and the remainder from a recipe made of egg yolk, oil of roses and turpentine, and left overnight. Pare discovered that the soldiers treated with the boiling oil were in agony, whereas the one treated with ointment had recovered because of the antiseptic properties of turpentine. This proved this method's efficacy, and he avoided cauterization thereafter (1). However, treatment such as this were not widely used until many years later. He published his first book *The method of curing wounds caused by arquebus and firearms* in 1545.

Pare also reintroduced the ligation of arteries (first used by Galen) instead of cauterization during amputation. The usual method of sealing wounds by searing with red-hot iron often failed to arrest the bleeding and caused patients to die of shock. For the ligation technique he designed the "*Bec de Corbin*" ("*Crow's beak*"), a predecessor to modern hemostats. Although ligatures often spread infection, it was still an important breakthrough in surgical practice. Pare detailed the technique of using ligatures to prevent hemorrhaging during amputation in his 1564 book *Treatise on Surgery*. During his work with injured soldiers, Pare documented the pain experienced by amputees which they perceive as sensation in the 'phantom' amputated limb. Pare believed that phantom pains occur in the brain (the consensus of the medical community today) and not in remnant of the limb.

Pare was also an important figure in the progress of obstetrics in the middle of the 16<sup>th</sup> century. He revived the practice of podalic version, and showed how even in cases of head presentation, and surgeons with this operation could often deliver the infant safely, instead of having to dismember the infant and extract the infant piece by piece.

Pare also introduced the lancing of infants' gums using a lancet during teething, in the belief that teeth

were failing to emerge from the gums due to lack of a pathway, and this failure was a cause of death. This belief and practice persisted for centuries, with some exceptions, until towards the end of the nineteenth century lancing became increasingly controversial and was then abandoned (2).

In 1567, Ambroise Pare described an experiment to test the properties of bezoar stones. At the time, the stones were commonly believed to be able to cure the effects of any poison, but Pare believed this to be impossible. It happened that a cook at Pare court was caught stealing fine silver cutlery, and was condemned to be hanged. The cook agreed to be poisoned, on the conditions that he would be given a bezoar straight after the poison and go free in case he survived. The stone did not cure him, and he died in agony seven hours after being poisoned. Thus Pare had proved that bezoars could not cure all poisons (3).

Pare's writings further include the results of his methodical studies on effects of violent death on internal organs. He also created and wrote, *Reports in Court* a procedure on writing of legal reports in relation to medicine (4). His writings and instructions are known to be the beginning of modern forensic pathology. Pare contributed both to the practice of surgical amputation and to the design of limb prosthesis (5). He also invented some ocular prosthesis (6) making artificial eyes from enameled gold, silver, porcelain and glass.

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